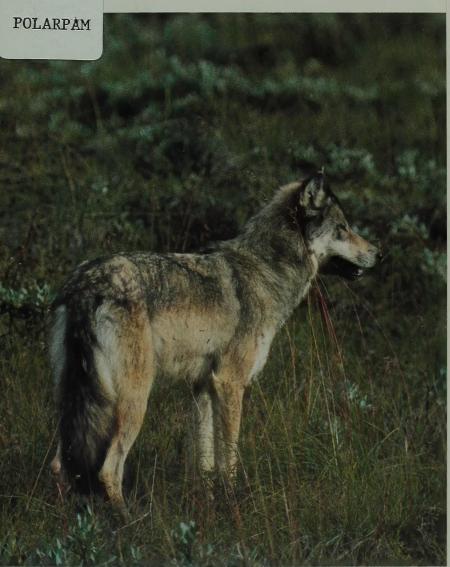
Wildlife of Denali

POLAR PAM 5402 National Park and Preserve

along the park road



Jack Thompson

The world needs an embodiment of the frontier mythology, the sense of horizons unexplored, the mystery of uninhabited miles.

It needs a place where wolves stalk the strand lines in the dark, because a land that produces a wolf is a healthy, robust and perfect land.

Bob Weeden

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BOREAL INSTITUTE

Denali - of wilderness and wildlife

Lying in the shadow of North America's highest mountain, 20,320' Mt. McKinley, Denali National Park and Preserve is home to many species of northern wildlife that roam unmolested in this vast, sub-arctic wilderness. Denali offers an unsurpassed opportunity to observe these wild animals in their natural habitats. Established as a wildlife sanctuary through the efforts of naturalist-hunter-conservationist, Charles Sheldon, Denali remains much as it has for thousands of years: a vibrant, magnificent northern ecosystem, and today, a testament of man's respect and appreciation of this superlative of wild Alaska.

Taiga and Tundra - wildlife habitat

The wildlife of Denali sustain themselves in a harsh and often sparse northern environment. What appears as a beautiful wilderness setting may in reality be evidence of hard times to come. As an ecological unit, the park is a contrast of fierce winds that buffet the peaks of McKinley, the silence of 50 below nights on the river bottoms, the seemingly endless sunlight of summer, to the influence of warm, moisture-laden clouds that originate far to the west in the Bering Sea.

The tundra valleys, alpine slopes and willow draws along the rivers of Denali offer more than unsurpassed beauty. They also are the feeding places, denning areas and shelter for animals like grizzly bears, Dall sheep, golden eagles, lemmings, foxes and chickadees. This wide range of physical settings and wildlife combined with the foundation of all food sources, plants, can be arranged into two basic ecological units, two plant community associationstaiga and tundra.

Armed with a bit of knowledge about these two vegetation mosaics and a few of the habitats within them, the visitor in Denali, rather than seeing wildlife scattered "at random," will better understand the valuable and integral relationship between wildlife and its habitat.

Prospecting for wildlife

By identifying the basic kinds of habitat, you will be better able to predict what species you should see out the window of your bus. Wildlife watching in Denali is fun, exciting and rewarding. Thirty-seven species of mammals, 139 species of birds and 450 species of plants live in the zone between 1600' at park headquarters and 6000' above, at snowline. The wildlife of Denali offers a memorable and unique natural history experience; one sure to leave you enchanted and eager to return to Denali National Park and Preserve, Alaska.



lack Thompson

Nutritious, aquatic plants fuel the growth of this bull moose's antlers. New, green leaves of diamondleaf willows, stripped from their twigs, are an equally important summer food.

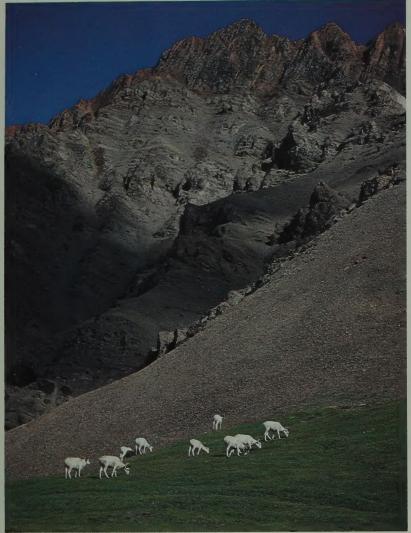
In winter, the most nutritious part left, twigs, will be browsed from the taller feltleaf willows that protrude above the snows burying the shorter diamondleaf species. Many species of wildlife employ this strategy of maximizing seasonally the best of their food sources.

Taiga - forest of the subarctic

Boreal forests, taiga, are found scattered across the landscapes of subarctic Alaska, Canada and Siberia. In Denali, the taiga is composed mainly of spruce trees and gives way to shrubby subalpine tundra near 2500' altitude on mountainsides.

White spruce forests favor well drained river bottoms, free of permafrost, and warm, dry south-facing slopes. An understory of vegetation is browsed by moose, and in the willow thickets snowshoe hares gnaw bark from young branches. The ground is carpeted with fragile, pale-green lichen, or caribou moss. Red squirrels cache mushrooms in spruce branches. A marten speeds in pursuit of a tiny red-backed vole amid the roots of those same ancient spruce trees. An elegant lynx searches the willow draws, while a horned-owl silently sweeps overhead - both in quest of the snowshoe hare. During winter, caribou will move into more open taiga forests where softer snow lends an easier time pawing to reach the lichens beneath.

Black spruce are adapted to colder, poorly drained permafrost lowlands with a northern exposure. A thick layer of sphagnum moss insulates the frozen ground from the continuous summer sun. This simpler, less productive environment offers poorer habitat for the wildlife of Denali.



Tom Walker

A band of rams grazes in an alpine meadow of Igloo Mountain. Nearby basalt rocks provide ``escape terrain'' from their primary predator, the wolf. Grassy, alpine meadows and escape terrain-two requirements of good sheep habitat.

Alpine Tundra

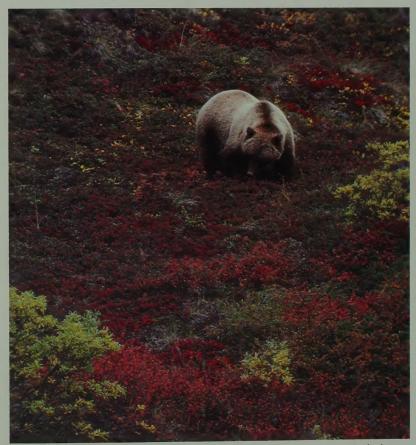
High above the last white spruce of the Teklanika, the feltleaf willows give way to extensive dwarf birch shrubs, and finally, they too, yield to a small green meadow far, far from the shimmering glint of the summer sun on your bus.

The clumps of sedge tussocks of the low tundra meadows that hikers stumble through have been replaced on these well-drained slopes by bunches of hardy, drier grasses. On this green, smooth carpet are sprinkled the diminutive pink flowers of moss campion. Rhododendrons and black crowberries mix with a mat of white mountain avens. A single willow shrub clings precariously to a rivulet of water. In the rocky crags above, a band of Dall sheep ewes, their quick lambs and curious yearlings stand staring, poised. The piercing whistle of a marmot echoes off the mountainside. A golden eagle soars overhead.

Color - your habitat flag

Fall in Denali offers more than superb photographic opportunities of moose browsing in blazing yellow willow thickets amid the green of a spruce forest. Those very colors offer an easily used and accurate indicator of plant community composition: the kinds of berries, roots and leaves the many wild animals are feeding on in their steady, devoted preparation for the long winter ahead.

Plants are able to successfully inhabit specific ecological settings in response to a mixture of features and requirements unique to each: moisture, exposure to the sun, altitude, drainage patterns, stability and protection from the wind. These plants are as predictable in meeting their needs as they are in the variety of fall colors they display. The "habitat flags" of taiga and tundra, the subtle autumn shades of reds and pinks, yellows and greens provide a quick and easy reference to the types of habitat within view, thus the kinds of wildlife you might expect to see.



Jack Thompson

An adult male grizzly noses the dull burgundy leaves of blueberries, a major fall food, on an alpine slope mixed with the prostrate, fire-red leaves of the black alpine bearberry, the yellow of a willow shrub and the pink leaves of dwarf birch. A few green grasses persist amid the tiny evergreen leaves of black crowberries.



Jack Thompson

An adult bull caribou feeds on arctic willows, a matted willow that rises but a few inches above the surface of the moist, subalpine tundra beyond Polychrome Pass.



Tom Walke

The evening sun highlights a bull moose feeding in a well browsed patch of the much preferred diamondleaf willow at the edge of the taiga forest above the Sanctuary River. The largest of all North American wild ungulates, they rely primarily on willows for their sustenance, especially in winter.

Moose, caribou and Dall sheep use taste, texture and smell to discern the more palatable and nutritious plants found growing on the mountain sides and river bottoms of Denali National Park and Preserve.

Wildlife Watchers' Hints

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Once you know what to look for, \$1.00 life becomes easier and more fun: contrast, movement, color and shape are important features to recognize.

- Barn-sized brown moose in a green willow thicket
- Golden hump of a grizzly swaying side to side
- White dots, motionless Dall sheep on a gray talus slope

Look everywhere. Don't be surprised if you see a band of sheep crossing the river bottom or a cow moose and her calf in a high mountain valley.

With a rapidly changing mosaic of vegetation along the park road, look for key features of the patterns that will help to identify the plant communities and the physical settings - the habitat - of the wildlife of Denali. Good luck, have fun and don't forget your binoculars.

Many educational publications and other information to enhance your visit along the park road are available at the park visitor centers. These items are sold by the Alaska Natural History Association, which assists the National Park Service in their interpretative programs at Denali National Park and Preserve.

P.O. Box 9, McKinley Park, Alaska 99755.



Jack Thompson

A hoary marmot snips a mouthful of grass at its burrow at Marmot Rock near Polychrome Pass.



Jack Thompson

A friendly, cautious photographer captures the attention of this red fox at the entrance of a summer den near Story Hill.



Tom Walher

A male willow ptarmigan surveys his breeding territory during spring in Denali from a clump of red-stemmed willows. A close look will reveal where he has nipped the buds from the ends of the twigs, and where a moose has browsed the larger stems.

The willow ptarmigan, the Alaska state bird, favors wetter, shrubby subalpine slopes to make its nest. These males will share in the rearing of the chicks throughout the summer; the only male grouse in North America exhibiting this behavior.

Wildlife and Willows - a natural relationship

Animals, like people, need suitable places for the daily business of living. They need accessible food, shelter from bad weather, hiding places and running room, good places for winning mates and denning. If you know an animal's needs and have a good eye for reading country, usually you know where to look for the species.

In Denali, the canny eye runs across the landscape, automatically checking the food patches, escape cover, perches, good burrowing soil, potential antler-rubbing trees, and dozens of other special places. Inevitably, if you know Alaska's mountains, you will look for willow thickets in draws, moist slopes and along streams.

Like magnets, willows attract wildlife, big or little. In winter, snowshoe hares browse on twigs and bark, and moose chew branches down to the diameter of your finger. In summer, moose and caribou strip young leaves from willow stems while redpolls (small finches of the tundra) sit on nests lined with the fluff from overripe willow catkins.

Willows symbolize the best of the North: hardiness, resilience, grace, and, for those who know their secrets, a surprising bounty.

Willows occupy a wide variety of plant communities from the alpine meadows of Cathedral Mountain, down the slopes to the edge of the spruce forests above the Teklanika River, across the broad tundra meadows of Sable Pass and scattered about the gravel and silt-laden river bars of the Toklat.

Willows are adapted to this wide variety of ecological settings and are important to many species of wildlife inhabiting these diverse habitats throughout the seasons. They are a good indicator of successional changes in the environment and can be seen associated with seasonal fluvial disturbances to riverbeds, frost disturbed tundra and recently burned forests.

In Alaska, there are 43 species of willow (the genus Salix.) As they thrive in and are adapted to disturbed ecological settings, new willows are always growing somewhere. It is this summers' new growth of leaves, catkins and twigs that is of vital importance to many types of wildlife.

Willows range in size from eight dwarf species like arctic willow, to the waist-high diamondleaf willow, and the abundant feltleaf willows often reaching 20 feet. They all provide an important, highly nutritious source of food throughout the year for the wildlife of Denali.

Grizzly Bears of Sable Pass

A haystack of yellow fur emerges from a small, snowfilled swale amid a rapidly greening tundra hillside. A side-to-side gait carries the sow grizzly slowly to the downslope edge of the snowbank. She bites off the young, tender and juicy shoots of bear flower and grasses. Two cubs, one a golden hue and the other chocolate brown, wrestle and tumble on the grassy slopes, never far from their mother.

Sable Pass is a favored feeding area for grizzly bears. This subalpine tundra provides optimal conditions for the abundant growth of grasses, sedges, horsetail and other vegetation preferred by grizzly bears. A key to the use of Sable Pass throughout the summer is the extended duration of snowmelt on the hillside. These snow patches melt as summer progresses, providing moist sites for new plant growth. The bears take full advantage of this highly nutritious, new plant growth as long as they can.

Bears rely primarily on vegetation to sustain themselves. They must process vast quantities of plant material and can be seen moving and feeding much of the time. The Toklat River is good habitat to see bears feeding during the fall on the roots of a legume peavine, "Eskimo potato," and the bitter, red soapberries.

However, bears aren't only vegetarians. They have a penchant for practically anything organic. They dig out arctic ground squirrels, eat mice, occasionally kill moose and caribou calves in spring and adults in fall, and in early spring they often feed on carrion. With such diverse food habits, grizzly bears can be seen at any time in any taiga or tundra habitat in Denali National Park and Preserve. And for the keen observer, somewhere on the hillside of Sable Pass, that sow grizzly and her cubs still linger.

Sable Pass Wildlife Protection Zone is optimal grizzly bear habitat and affords park visitors an outstanding opportunity to observe and photograph grizzly bears and other wildlife from the park road.

No hiking of any nature is allowed in the zone and passengers on the park buses and other vehicles must remain on the road.

Grizzly bears, and other wildlife, should be considered potentially dangerous and unpredictable. To help ensure a safe and memorable visit:

- Make noise when hiking, especially in heavy timber or willows
- · Do not feed
- Keep a clean camp
- Avoid direct interaction
- Keep your distance
- Do not run if approached by wild animals